

Study program: Pharmacy			
Type and level of studies: Integrated academic studies, Level 1/2			
Course unit: Organic chemistry 2			
Teacher in charge: Dr Marija Živković, assistant professor			
Language of instruction: English			
ECTS: 6			
Prerequisites: Completed course in Organic chemistry 1			
Semester: Winter semester			
Course unit objective: Acquiring knowledge and skills of fundamental organic chemistry and laboratory practice.			
Learning outcomes of Course unit:			
Knowledge about:			
<ul style="list-style-type: none"> • organic stereochemistry, structure, configuration, conformation; • defining stereoisomers, enantiomers, diastereomers; • absolute and relative configuration, resolution of stereoisomers, racemization; • relationship between biological activity and stereochemistry of organic molecules; • stereochemistry of alkenes, conformation of acyclic molecules, configuration and conformation of cyclic molecules; • understanding of the relationship between the chemical properties of pairs of enantiomers or diastereomers. 			
Course unit contents			
<i>Theoretical classes</i>			
<i>Structure of organic compounds. Organic reactions. Electronic effects in organic molecules. Electrometric effects. Hyperconjugation. Aromaticity. Stereochemistry. Stereochemistry of acyclic compounds. Stereochemistry of unsaturated and cyclic compounds. Intermolecular forces. Acid-base equilibrium systems in organic chemistry. Basicity (alkalinity) of organic compounds. Nomenclature, general principles of heterocycle synthesis. Five-member heterocycles with one heteroatom. Six-member heterocycles with one heteroatom. Benzopyridines. Five-member heterocycles with two heteroatoms. Six-member heterocycles with two heteroatoms.</i>			
<i>Practical classes</i>			
<i>Structure of organic compounds. Organic reactions. Chemical bonds. Electronic effects in organic molecules. Stereochemistry. Stereochemistry of acyclic, cyclic, and unsaturated compounds. Intermolecular forces. Acid-base equilibrium systems in organic chemistry. Heterocyclic compounds with one and two heteroatoms.</i>			
Literature			
<ul style="list-style-type: none"> • Mihajlović M. Fundamentals of theoretical organic chemistry and stereochemistry, "Građevinska knjiga" Belgrade, 1972. • Pavlov S. Introduction to the chemistry of heterocyclic compounds, University of Belgrade, Faculty of Pharmacy, 1997. 			
Number of active teaching hours			Other classes
Lectures: 30	Practice: 15	Other forms of classes: Independent work:	
Teaching methods: Lectures, laboratory practice			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures	30	oral examination	
practical classes/tests		written examination	70
Seminars/homework		
Project			
Other			

Course unit description

Grading system		
Grade	No. of points	Description
10	91-100	Excellent
9	81 – 90	Exceptionally good
8	71 – 80	Very good
7	61 – 70	Good
6	51 – 60	Passing
5	< 51	Failing

(Table 5.2) Course unit description